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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,591	12/31/2003	Niranjan Damera-Venkata	200315400-1	8596

22879 7590 06/05/2007

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EXAMINER	
DHARIA, PRABODH M	
ART UNIT	**PAPER NUMBER**
2629	

MAIL DATE	DELIVERY MODE
06/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/750,591	DAMERA-VENKATA ET AL.	
	Examiner	Art Unit	
	Prabodh M. Dharia	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *See Continuation Sheet*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :12-20-04,02-13-04,07-27-06, and 12-31-03 .

1. **Status:** Please all the replies and correspondence should be addressed to examiner's new art unit 2629. Receipt is acknowledged of papers submitted on 12-31-2003 under new application, which have been placed of record in the file. Claims 1-32 are pending in this action.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 12-20-04,02-13-04,07-27-06, and 12-31-03 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lubin et al. (US 6075884) in view of , Conner et al. (US 2005/0225732 A1).

Regarding Claim 1, Lubin et al. teaches a system for displaying an image (Col. 2, Lines 61-65), the system comprising: a buffer adapted to receive a first set of image data for a first image (Col. 2, Lines 61-65, Col. 3, Lines 18-24); and spatio-temporal characteristics of a human visual system (Col. 7, Lines 1-13).

However, Lubin et al. fail to disclose an image processing unit configured to define first and second sub- frames corresponding to the first set of image data; and a display device having a set of defective display pixels, the display device adapted to alternately display the first sub-frame in a first position and the second sub-frame in a second position spatially offset from the first position, wherein the first position and the second position are identified based on positions of the defective display pixels.

However, Conner et al. teaches a method of displaying an image with a display device having a set of defective display pixels (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraph 41), the method comprising: receiving image data for the image (page 2, paragraph 24); generating a first sub-frame and a second sub-frame corresponding to the image data (page 3, paragraph 40-42); and selecting a first position and a second position spatially offset from the first position (page 2, paragraph 27, page 3, paragraph 30, pages 4,5, paragraphs 52,53), the first and the second positions selected based on positions of the defective display pixels and characteristics of a human visual system (page 3, paragraphs 41,31-37); and alternating between displaying the first sub-frame in the first position and displaying the second sub-frame in the second position (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,5, paragraphs 52,53).

The reason to combine is to be able to shift pixel so defective pixels formed due to shifting help human vision to reduce or minimize visual artifacts in projection type display.

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate Conner et al. teaching in teaching of Lubin et al. to be able to have a projection

display displaying defective pixels due to shifting producing lower resolution of blue color components help human vision to reduce or minimize visual artifacts (page 3, paragraph 41).

Regarding Claim 2, Conner et al. teaches teaches generating a third sub-frame and a fourth sub-frame corresponding to the image data; selecting a third position spatially offset from the first position and the second position, and a fourth position spatially offset from the first position, the second position, and the third position, the third and the fourth positions selected based on positions of the defective display pixels and characteristics of a human visual system; and wherein alternating between displaying the first sub-frame and displaying the second sub-frame further includes alternating between displaying the first sub-frame in the first position, displaying the second sub-frame in the second position, displaying the third sub-frame in the third position, and displaying the fourth sub-frame in the fourth position (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,5, paragraphs 52,53, it is obvious as Conner et al. teaches multiple sub-frames (more than two) and they are offset from each other by about one-half their shared pitch, please see figures 2,3,4,7).

Regarding Claim 3, Conner et al. teaches receiving a second set of image data for a second image; generating a third sub-frame and a fourth sub-frame corresponding to the second set of image data selecting a third position and a fourth position spatially offset from the third position, the third and the fourth positions selected based on positions of the defective display pixels and characteristics of a human visual system; and alternating between displaying the third sub-flame in the third position and displaying the fourth sub-flame in the fourth position (page 1,

paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,5, paragraphs 52,53, it is obvious as Conner et al. teaches multiple sub-frames (more than two) and they are offset from each other by about one-half their shared pitch, please see figures 2,3,4,7).

Regarding Claim 4, Conner et al. teaches the third position is spatially offset from the first position and the second position, and wherein the fourth position is spatially offset from the first position, the second position, and the third position (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,5, paragraphs 52,53, it is obvious as Conner et al. teaches multiple sub-frames (more than two) and they are offset from each other by about one-half their shared pitch, please see figures 2,3,4,7).

Regarding Claim 5, Conner et al. teaches the first position and the second position are selected from a plurality of allowable positions (page 3, paragraphs 31-37).

Regarding Claim 6, Conner et al. teaches the image processing unit is configured to evaluate different combinations of the plurality of allowable positions to identify a combination that minimizes an effect of the defective display pixels on the human visual system (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,55, paragraphs 52,53).

Lubin et al. teaches a system for displaying an image (Col. 2, Lines 61-65), the system comprising: a buffer adapted to receive a first set of image data for a first image (Col. 2, Lines 61-65, Col. 3, Lines 18-24); and spatio-temporal characteristics of a human visual system (Col. 7, Lines 1-13).

Regarding Claim 7, Conner et al. teaches the image processing unit is configured to generate a plurality of sequences of test images, each sequence of test images corresponding to a different combination of the plurality of allowable positions (pages 2,3, paragraphs 24-41 to improve the image quality and reduce artifacts effect to human vision the blue color is adjusted or black is added to maintain contrast or pixels are shifted about one-half their shared pitch).

Regarding Claim 8, Lubin et al. teaches the image processing unit is configured to filter each sequence of test images with a spatio-temporal filter based on human visual system (HVS) characteristics (Col. 2, Lines 15-28, 61-65, Col. 3, Lines 18-24, 26-51, Col. 7, Lines 1-13 teaches encoder encoding image signals filtered based on human visual system).

Regarding Claim 9, Lubin et al. teaches the image processing unit is configured to identify a sequence of test images from the plurality of sequences of test images that has the smallest impact on the human visual system (Col. 1, Line 43 to Col. 2, Line 26, Lubin et al. teaches experimenting pluralities of sequences that has smallest impact on human visual).

Regarding Claim 10, Conner et al. teaches the first position and the second position are positions corresponding to the identified sequence of test images (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,5, paragraphs 52,53, please see figures 2,3,4,7).

Regarding Claim 11, Lubin et al. teaches a system for displaying an image (Col. 2, Lines 61-65), the system comprising: a buffer adapted to receive a first set of image data for a first image (Col. 2, Lines 61-65, Col. 3, Lines 18-24); and spatio-temporal characteristics of a human visual system (Col. 7, Lines 1-13).

However, Lubin et al. fail to disclose an image processing unit configured to define first and second sub- frames corresponding to the first set of image data; and a display device having a set of defective display pixels, the display device adapted to alternately display the first sub-frame in a first position and the second sub-frame in a second position spatially offset from the first position, wherein the first position and the second position are identified based on positions of the defective display pixels.

However, Conner et al. receiving image data for the image (page 2, paragraph 24); generating a first sub-frame and a second sub-frame corresponding to the image data (page 3, paragraph 42); and selecting a first position and a second position spatially offset from the first position (page 2, paragraph 27, page 3, paragraph 30, pages 4,5 paragraphs 52,53), the first and the second positions selected based on positions of the defective display pixels and characteristics of a human visual system (page 3, paragraph 41); and alternating between displaying the first sub-frame in the first position and displaying the second sub-frame in the second position (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,55, paragraphs 52,53) wherein the first position and the second position are identified based on positions of the defective display pixels (page 3, paragraphs 31-37,41) and spatio-temporal characteristics of a human visual system (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,5, paragraphs 52,53).

The reason to combine is to be able to shift pixel so defective pixels formed due to shifting help human vision to reduce or minimize visual artifacts in projection type display.

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate Conner et al. teaching in teaching of Lubin et al. to be able to have a projection display displaying defective pixels due to shifting producing lower resolution of blue color components help human vision to reduce or minimize visual artifacts (page 3, paragraph 41).

Regarding Claim 12, Conner et al. teaches the image processing unit is configured to define a third sub-frame and a fourth sub-frame corresponding to the first set of image data; and wherein the display device is configured to alternate between displaying the first sub-frame in the first position, displaying the second sub-frame in the second position, displaying the third sub-frame in a third position spatially offset from the first position and the second position, and displaying the fourth sub-frame in a fourth position spatially offset from the first position, the second position, and the third position, the third and the fourth positions identified based on positions of the defective display pixels and spatio-temporal characteristics of a human visual system (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,5, paragraphs 52,53, it is obvious as Conner et al. teaches multiple sub-frames (more than two) and they are offset from each other by about one-half their shared pitch, please see figures 2,3,4,7).

Regarding Claim 13, Conner et al. teaches the buffer is adapted to receive a second set of image data for a second image, the image processing unit is configured to define a third sub-frame and a fourth sub-frame corresponding to the second set of image data, and the display

device is configured to alternate between displaying the third sub-frame in a third position and displaying the fourth sub-frame in a fourth position, the third position and the fourth position identified based on positions of the defective display pixels and spatio-temporal characteristics of a human visual system (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,5, paragraphs 52,53, it is obvious as Conner et al. teaches multiple sub-frames (more than two) and they are offset from each other by about one-half their shared pitch, please see figures 2,3,4,7).

Lubin et al. teaches a system for displaying an image (Col. 2, Lines 61-65), the system comprising: a buffer adapted to receive a first set of image data for a first image (Col. 2, Lines 61-65, Col. 3, Lines 18-24); and spatio-temporal characteristics of a human visual system (Col. 7, Lines 1-13).

Regarding Claim 14, Conner et al. teaches the third position is spatially offset from the first position and the second position, and wherein the fourth position is spatially offset from the first position, the second position, and the third position (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,5, paragraphs 52,53, it is obvious as Conner et al. teaches multiple sub-frames (more than two) and they are offset from each other by about one-half their shared pitch, please see figures 2,3,4,7).

Regarding Claim 15, Conner et al. teaches the first position and the second position are identified from a plurality of allowable positions (page 3, paragraphs 31-37).

Regarding Claim 16, Conner et al. teaches the image processing unit is configured to evaluate different combinations of the plurality of allowable positions to identify a combination that minimizes an effect of the defective display pixels on the human visual system (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,55, paragraphs 52,53).

Lubin et al. teaches a system for displaying an image (Col. 2, Lines 61-65), the system comprising: a buffer adapted to receive a first set of image data for a first image (Col. 2, Lines 61-65, Col. 3, Lines 18-24); and spatio-temporal characteristics of a human visual system (Col. 7, Lines 1-13).

Regarding Claim 17, Conner et al. teaches the image processing unit is configured to generate a plurality of sequences of test images, each sequence of test images corresponding to a different combination of the plurality of allowable positions (pages 2,3, paragraphs 24-41 to improve the image quality and reduce artifacts effect to human vision the blue color is adjusted or black is added to maintain contrast or pixels are shifted about one-half their shared pitch).

Regarding Claim 18, Lubin et al. teaches the image processing unit is configured to filter each sequence of test images with a spatio-temporal filter based on human visual system (HVS) characteristics (Col. 2, Lines 15-28, 61-65, Col. 3, Lines 18-24, 26-51, Col. 7, Lines 1-13 teaches encoder encoding image signals filtered based on human visual system).

Regarding Claim 19, Lubin et al. teaches the image processing unit is configured to identify a sequence of test images from the plurality of sequences of test images that has the

smallest impact on the human visual system (Col. 1, Line 43 to Col. 2, Line 26, Lubin et al. teaches experimenting pluralities of sequences that has smallest impact on human visual).

Regarding Claim 20, Conner et al. teaches the first position and the second position are positions corresponding to the identified sequence of test images (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,5, paragraphs 52,53, please see figures 2,3,4,7).

Regarding Claim 21, Lubin et al. teaches a system for displaying an image (Col. 2, Lines 61-65), the system comprising: a buffer adapted to receive a first set of image data for a first image (Col. 2, Lines 61-65, Col. 3, Lines 18-24); and spatio-temporal characteristics of a human visual system (Col. 7, Lines 1-13).

However, Lubin et al. fail to disclose a system for displaying low resolution sub-frames at spatially offset positions to generate the appearance of a high resolution image the system comprising: means for receiving high resolution images; means for generating a plurality of low resolution sub-frames for each high resolution image; means for displaying the plurality of low resolution sub-frames at a sequence of spatially offset positions, the means for displaying including at least one defective display pixel; and means for identifying the sequence of spatially offset positions based on a position of the defective display pixel and characteristics of a human visual system to minimize an impact of the defective display pixel on the human visual system.

However, Conner et al. teaches a system for displaying low resolution sub-frames at spatially offset positions to generate the appearance of a high resolution image (pages 3,4,

paragraphs 40,41, page 2, paragraph 26-28, page 1, paragraphs 7,8) the system comprising: means for receiving high resolution images; means for generating a plurality of low resolution sub-frames for each high resolution image (pages 3,4, paragraphs 40,41, page 2, paragraphs 26-28, page 1, paragraphs 7,8); means for displaying the plurality of low resolution sub-frames at a sequence of spatially offset positions (pages 3,4, paragraphs 37-41), the means for displaying including at least one defective display pixel (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 31-37, 41); and means for identifying the sequence of spatially offset positions based on a position of the defective display pixel and characteristics of a human visual system to minimize an impact of the defective display pixel on the human visual system (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30-37,41,42, pages 4,5, paragraphs 52,53).

The reason to combine is to be able to shift pixel so defective pixels formed due to shifting help human vision to reduce or minimize visual artifacts in projection type display.

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate Conner et al. teaching in teaching of Lubin et al. to be able to have a projection display displaying defective pixels due to shifting producing lower resolution of blue color components help human vision to reduce or minimize visual artifacts (page 3, paragraph 41).

Regarding Claim 22, Conner et al. teaches the image processing unit is configured to generate a plurality of sequences of test images, each sequence of test images corresponding to a different combination of the plurality of allowable positions (pages 2,3, paragraphs 24-41 to improve the image quality and reduce artifacts effect to human vision the blue color is adjusted or black is added to maintain contrast or pixels are shifted about one-half their shared pitch).

Regarding Claim 23, Lubin et al. teaches the means for identifying includes means for evaluating different combinations of the plurality of allowable positions to identify a combination that minimizes an impact of the defective display pixel on the human visual system. (Col. 2, Lines 15-28, 61-65, Col. 3, Lines 18-24, 26-51, Col. 7, Lines 1-13, teaches encoder encoding image signals filtered based on human visual system).

Regarding Claim 24, Lubin et al. teaches the means for identifying includes means for generating a plurality of sequences of test images, each sequence of test images corresponding to a different combination of the plurality of allowable positions (Col. 1, Line 43 to Col. 2, Line 26, Lubin et al. teaches experimenting pluralities of sequences that has smallest impact on human visual).

Conner et al. teaches the means for identifying includes means for generating a plurality of sequences of test images, each sequence of test images corresponding to a different combination of the plurality of allowable positions (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,5, paragraphs 52,53, it is obvious as Conner et al. teaches multiple sub-frames (more than two) and they are offset from each other by about one-half their shared pitch, please see figures 2,3,4,7).

Regarding Claim 25, Lubin et al. teaches the image processing unit is configured to filter each sequence of test images with a spatio-temporal filter based on human visual system (HVS)

characteristics (Col. 2, Lines 15-28, 61-65, Col. 3, Lines 18-24, 26-51, Col. 7, Lines 1-13 teaches encoder encoding image signals filtered based on human visual system).

Regarding Claim 26, Lubin et al. teaches the means for identifying includes means for identifying a sequence of test images from the plurality of sequences of test images that has the smallest impact on the human visual system (Col. 1, Line 43 to Col. 2, Line 26, Col. 2, Lines 15-28, 61-65, Col. 3, Lines 18-24, 26-51, Col. 7, Lines 1-13, Lubin et al. teaches experimenting pluralities of sequences that has smallest impact on human visual).

Regarding Claim 27, Lubin et al. teaches the identified sequence of spatially offset positions comprises positions corresponding to the identified sequence of test images (Col. 2, Lines 15-28, 61-65, Col. 3, Lines 18-24, 26-51, Col. 7, Lines 1-13 teaches encoder encoding image signals filtered based on human visual system).

Regarding Claim 28, Lubin et al. teaches a computer-readable medium having computer-executable instructions for performing (Col. 3, Lines 18-50).

Lubin et al. fails to teach a method of identifying spatially offset display positions for low resolution sub-frames, the sub-frames generating the appearance of a high resolution image when displayed by a display device at the identified positions, comprising: identifying a plurality of different combinations of the display positions; and analyzing each of the combinations to identify a combination of display positions that minimizes an effect of defective display pixels of the display device on a human visual system.

Conner et al. teaches a method of identifying spatially offset display positions for low resolution sub-frames, the sub-frames (pages 3,4, paragraphs 39-41) generating the appearance of a high resolution image when displayed by a display device at the identified positions (page 3, 31-36, pages 3,4, paragraphs 40,41, page 2, paragraphs 26-28, page 1, paragraphs 7,8), comprising: identifying a plurality of different combinations of the display positions; and analyzing each of the combinations to identify a combination of display positions that minimizes an effect of defective display pixels of the display device on a human visual system (pages 2,3, paragraphs 23-36, pages 3,4, paragraphs 40,41, page 2, paragraphs 26-28, page 1, paragraphs 7,8).

The reason to combine is to be able to shift pixel so defective pixels formed due to shifting help human vision to reduce or minimize visual artifacts in projection type display.

Thus it is obvious to one in the ordinary skill in the art at the time of invention was made to incorporate Conner et al. teaching in teaching of Lubin et al. to be able to have a projection display displaying defective pixels due to shifting producing lower resolution of blue color components help human vision to reduce or minimize visual artifacts (page 3, paragraph 41).

Regarding Claim 29, Lubin et al. teaches the method further comprises: generating a plurality of sequences of test images, each sequence of test images corresponding to a different combination of display positions. (Col. 1, Line 43 to Col. 2, Line 26, Col. 2, Lines 15-28, 61-65, Col. 3, Lines 18-24, 26-51, Col. 7, Lines 1-13, Lubin et al. teaches experimenting pluralities of sequences that has smallest impact on human visual).

Conner et al. teaches the method further comprises: generating a plurality of sequences of test images, each sequence of test images corresponding to a different combination of display positions. (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,5, paragraphs 52,53, it is obvious as Conner et al. teaches multiple sub-frames (more than two) and they are offset from each other by about one-half their shared pitch, please see figures 2,3,4,7).

Regarding Claim 30, Lubin et al. teaches teaches the method further comprises: filtering each sequence of test images with a filter based on human visual system (HVS) spatio-temporal characteristics (Col. 2, Lines 15-28, 61-65, Col. 3, Lines 18-24, 26-51, Col. 7, Lines 1-13, teaches encoder encoding image signals filtered based on human visual system).

Regarding Claim 31, Lubin et al. teaches the means for identifying includes means for identifying a sequence of test images from the plurality of sequences of test images that has the smallest impact on the human visual system (Col. 1, Line 43 to Col. 2, Line 26, Col. 2, Lines 15-28, 61-65, Col. 3, Lines 18-24, 26-51, Col. 7, Lines 1-13, Lubin et al. teaches experimenting pluralities of sequences that has smallest impact on human visual).

Regarding Claim 32, Lubin et al. teaches the identified combination of display positions comprises positions corresponding to the identified sequence of test images (Col. 1, Line 43 to Col. 2, Line 26, Lubin et al. teaches experimenting pluralities of sequences that has smallest impact on human visual).

Conner et al. teaches the identified combination of display positions comprises positions corresponding to the identified sequence of test images (page 1, paragraph 6, page 2, paragraph 24, page 3, paragraphs 30,41,42, pages 4,5, paragraphs 52,53, it is obvious as Conner et al. teaches multiple sub-frames (more than two) and they are offset from each other by about one-half their shared pitch, please see figures 2,3,4,7).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yang, Yibin (US 20030123747 A1) System for and method of sharpness enhancement using coding information and local spatial features.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M. Dharia whose telephone number is 571-272-7668. The examiner can normally be reached on M-F 8AM to 5PM.

7. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Prabodh Dharia

Partial Signatory Authority

AU2629

May 21, 2007